

Date: Thursday, 23/04/2009 3:30:44 PM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : DOUBLER ASSEMBLY
Job Number : 47442B	
Estimate Number : 10294	
P.O. Number :	Part Number : D3220041
This Issue : 23/04/2009 S.O. No. :	Drawing Number : D3220 REV A1
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : MACHINED PARTS	Drawing Revision : A1
Previous Run : 46457B	Material :
Written By :	Due Date : 05/05/2009 Qty: 4 Um: Each
Checked & Approved By : <u>JUL 09.04.24</u>	
Comment : Est Rev:A New Issue 05-11-06 JLM	
Est: B 06.11.15 waterjet EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
----------------	------------------------------	----------------------

1.0	M2024T3S050	2024-T3 .050 sheet
-----	-------------	--------------------



Comment: Qty.: 0.7266 sf(s)/Unit Total : 2.9064 sf(s)
 Material: 2024-T3 (QQ-A-250/4) 0.050" thick
 (M2024T3S.050
 Identify for D3220-1
 Batch: 111381 1B 9-5-4

2.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



Comment: FLOW WATER JET
 1-Cut D3220-1 as per Dwg D3220
 Dwg Rev: A1 1B 9-5-4
 Prog Rev: A1
 2-Deburr if necessary 1B 9-5-4

(4)

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------



Comment: SECOND CHECK

502/05/04

(4)

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
-----	-------------	-------------------------------



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Deburr

502/05/05 (4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 23/04/2009 3:30:44 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOUBLER ASSEMBLY

Job Number: 47442B

Part Number: D3220041

Job Number:



Seq. #:

Machine Or Operation:

Description :

2-C'sink D3220-1 as per Dwg D3220

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09/05/05

(4)

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

UMP/ FL.

09/05/05

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

09.05.05

K4

9.0

MS20426AD34

RIVET



Comment: Qty.: 8.0000 Each(s)/Unit Total : 32.0000 Each(s)

Pick:

Qty Part Number

Description Batch

8 MS20426AD3-4

Rivet

M104374

10.0

MS21059L4

Nutplate



Comment: Qty.: 4.0000 Each(s)/Unit Total : 16.0000 Each(s)

Pick:

Qty Part Number

Description Batch

4 MS21059L4

Nutplate

M1106322

11.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3220-041 doubler as per Dwg D3220

09/05/06

(4)

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09/05/06

(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 23/04/2009 3:30:44 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOUBLER ASSEMBLY

Job Number: 47442B

Part Number: D3220041

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

ST 176

SS 09/05/06 (x4)

14.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/05/06 J

Job Completion



MF 09-05-06

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: L17442B
Description: Doubler		Part Number: D3220-1
Inspection Dwg: D3220 Rev: A1		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**

 ☐ **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
5.50	+/-0.030	5.501	X			
14.25	+/-0.030	14.25	X			
R0.50	+/-0.030	.50	X			
7.00	+/-0.030	7.007	X			
7.000	+/-0.005	7.003	X			
1.50	+/-0.030	1.501	X			
1.000	+/-0.005	1.000	X			
0.500	+/-0.005	.500	X			
1.000	+/-0.005	1.001	X			
0.316	+0.005/-0.000	.319	X			
0.098	+0.005/-0.000	.101	X			
0.050 thick	+/-0.005	.049	X			
Grain Direction	N/A		X			

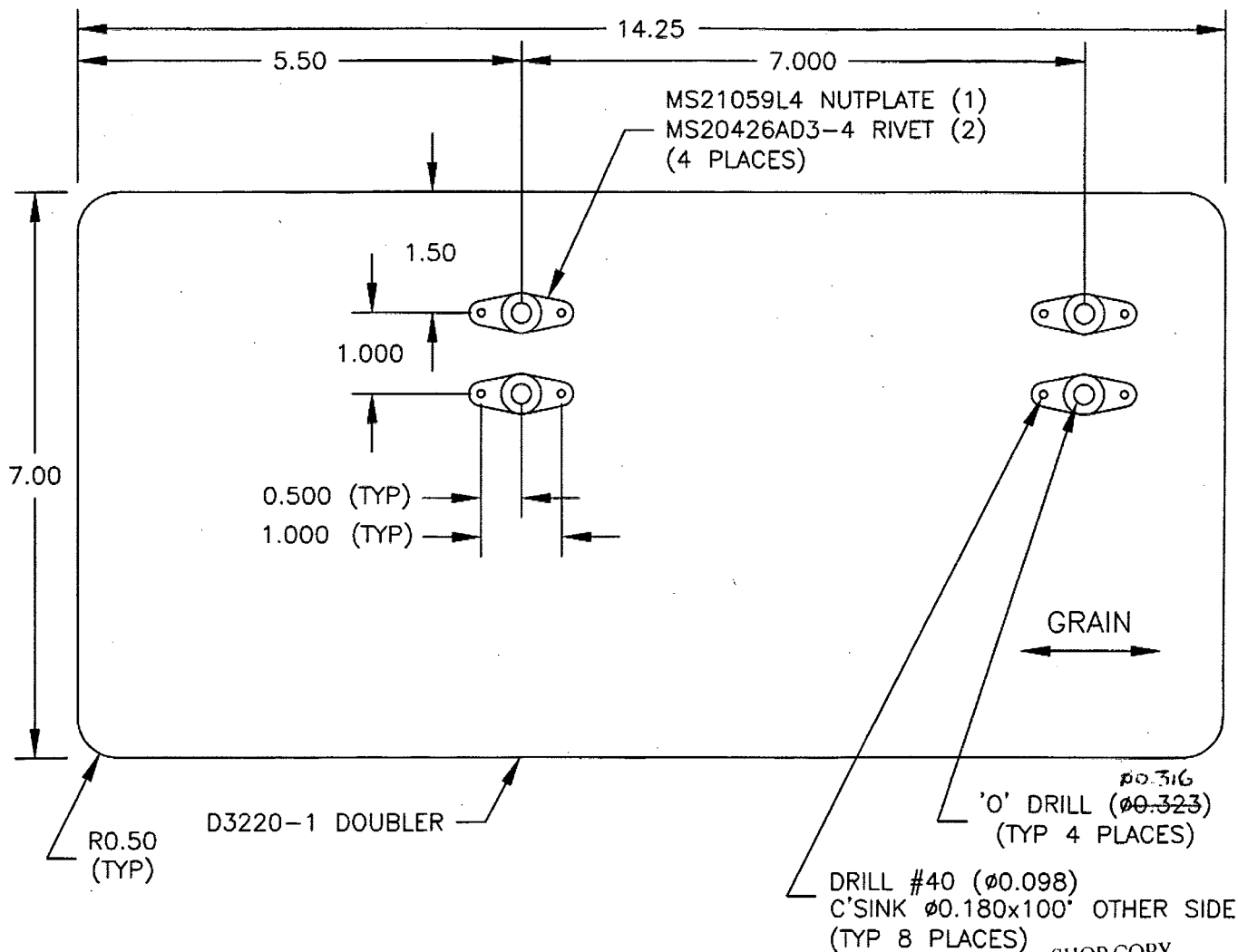
Measured by: RB	Audited by: S	Prototype Approval:	N/A
Date: 9-5-11	Date: 07/05/04	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.02.27	New Issue	KJ/RF	

DART

DESIGN #		DRAWN BY CP		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #		APPROVED #		DRAWING NO. D3220	REV. A SHEET 1 OF 2
DATE 03.10.16				TITLE DOUBLER	SCALE 1:2
A		03.10.16		NEW ISSUE	
AI		CP # 03.11.13		CORRECTED DIM	

RELEASED
03.11.14



D3220-041 (SHOWN) / -042 (OPPOSITE) DOUBLER ASSEMBLY (D3220-1 DOUBLER)

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.050 THICK
(REF DART SPEC. M2024T3S.090)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *14142B*

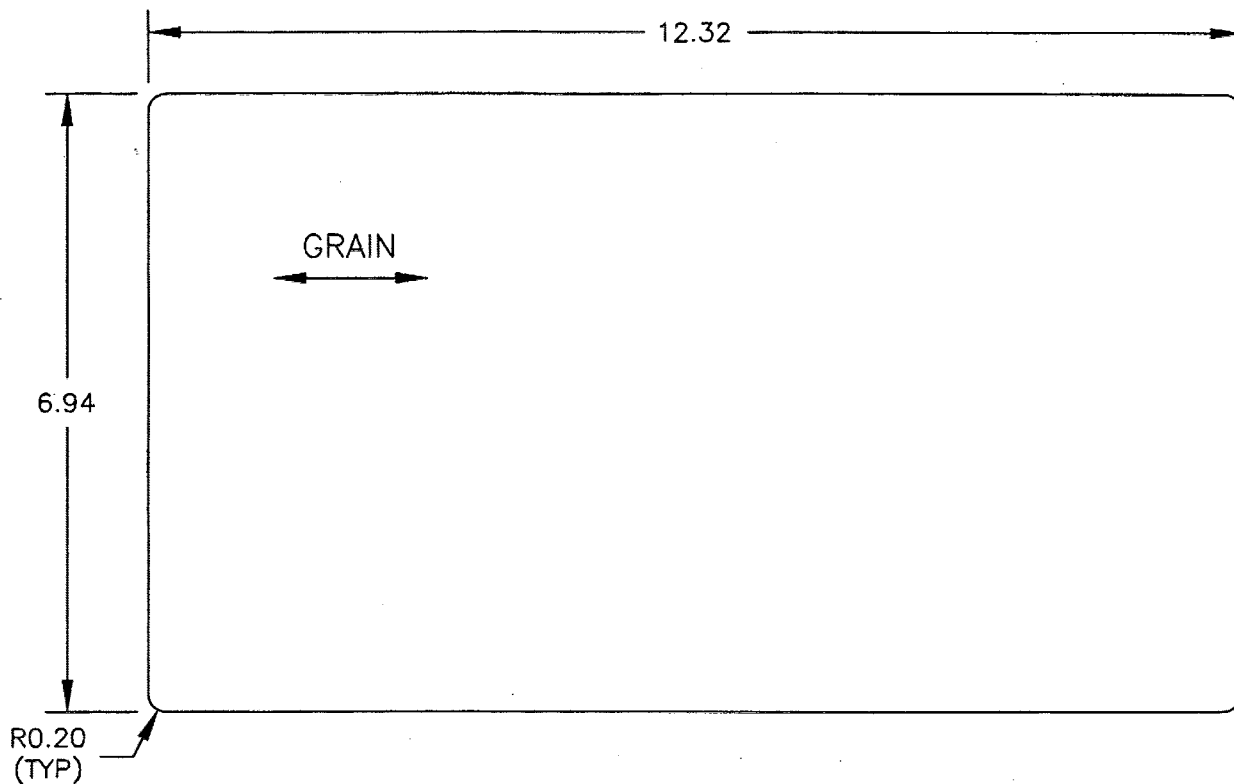
Copyright © 2003 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN #	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3220	REV. A SHEET 2 OF 2
DATE 03.10.16		TITLE DOUBLER	SCALE 1:2

03 11-14 #



D3220-3 DOUBLER

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.050 THICK
(REF DART SPEC. M2024T3S.050)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 47442B

Copyright © 2003 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.